United States
Department of
Agriculture

Forest Service

**Pacific Southwest
Forest and Range
Experiment Station**

P.O. Box 245
Berkeley
California 94701

RMO

GUIDE TO MID-CAREER TRAINING FOR SCIENTISTS

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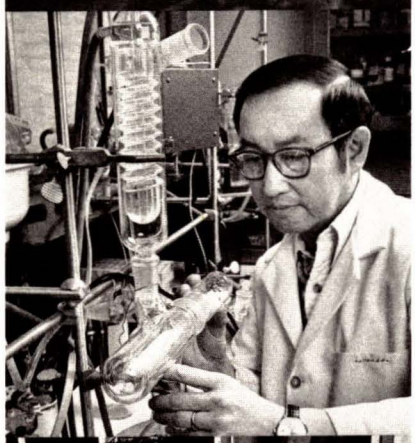

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Issued by

Pacific Southwest Forest and Range Experiment Station
P.O. Box 245, Berkeley, California 94701

April 1980

The objectives of the Forest Service employee development program are to maintain and improve each employee's ability to meet the standards of performance applicable to the principal duties and responsibilities of his or her position, and to prepare each employee for a satisfying, productive Forest Service career commensurate with his or her capabilities and based on needs of the Forest Service.

(Forest Service Manual 6141.02)

- The *Guide to Mid-Career Training for Scientists* was compiled by the Station's Committee of Scientists, chaired by Charles S. Hodges.
- The final report of the *Guide,* based on contributions from Committee members, was prepared by George T. Ferrell and Robert F. Powers.
- The Committee of Scientists was established in May 1979 by the Station Director to serve as a focal point for liaison with the scientific staff. The Committee seeks to encourage the training, utility, and productivity of Station scientists and to enhance the scientific climate in which they work.

Professional growth in a person hinges on the improvement of existing skills and the learning of new ones. Your growth in professional skills and knowledge as a Station scientist, is particularly vital because the benefits of timely scientific advances are multiplied many fold, and can trigger advances in parallel fields.

The Pacific Southwest Forest and Range Experiment Station recognizes that your continued training is vital in achieving and sustaining research of high caliber and consequence. Accordingly, Station policy holds that such training is *required* of all career scientists, with major, extramural training occurring at 7- to 10-year intervals.

Training is "packaged" in many "sizes," ranging from single-day short courses and specialty seminars to 6- to 12-month research fellowships at institutions in other countries. In their careers, Station scientists may experience the full span and degree of training opportunities.

This *Guide* outlines mid-career training opportunities important to you, and answers the questions asked most often about training.

What is mid-career training?

Mid-career training is exposure to new and stimulating ideas beyond those offered by the scientist's normal routine. Typically, it begins a few years after scientists received their most recent degree, and continues until a few years before retirement. Training usually is at U.S. Government expense and occurs in a new surrounding, such as a regional, national, or international scientific or technical meeting, or at an academic or research institution in the United States or abroad. The aim is to boost the scientist's creativity and productivity through an infusion of fresh ideas generated by new contacts, technology, and research environment. Because training does not involve a change in career status, the scientist's present position is guaranteed at the conclusion of training, though he or she may be away from the job for up to a year. This should not be confused with international assignments, such as bilateral programs and transfer to international agencies, such as the Food and Agricultural Organization of the United Nations. These assignments are research extension activities rather than training and require that the present position be vacated to free the scientist for a period extending 1 year or more. On completing the assignment, the scientist is not guaranteed a return to the same position, but is guaranteed a Forest Service equivalent position somewhere within the United States. For full information on reinstatement rights and benefits, see chapter 6135, Forest Service Manual.

Why mid-career?

Early in our research careers we stand at or near the forefront of knowledge in our respective fields. But theories and practices learned in universities and colleges are revised continually—and even the most inquisitive scientist has a difficult time staying abreast of important changes. As our careers progress, we often grow more insulated. Our work may begin following familiar patterns that served us well in the past. Scientifically, our "peripheral vision" may dim so that we are less aware of developments in related fields —developments that might affect our work substantially. While science expands about us, entropy carries us down narrowing paths. Many opportunities will be missed. In fact, we may not recognize them even if we see them.

Most Station scientists are between 35 and 45 years old, a period marked by psychologists as one of self-criticism and reevaluation. So, too, is this a time when as scientists we should be particularly introspective in weighing our research progress, productivity, and job satisfaction. We owe to ourselves, our country, and our science, research that is stimulating and vital. Much of our career remains before us. Dwindling effectiveness should be checked now.

From an economic standpoint, scientists at mid-career usually represent good investments on training costs. First, they do not begin training at "ground zero," but bring a solid base of knowledge that can be built to higher levels. Second, they already have demonstrated a capacity for scientific inquiry. Third, they possess clear concepts of problem areas of particular importance and resilience; simply, they should be able to "sort wheat from chaff." Fourth, they have enough time remaining in their careers for a tangible return on public investment.

How do I know if I need training?

To varying degrees, each of us becomes resistant to change in our research habits. This resistance stems partly from our defense of the territory we have built by continuing to repeat what has worked in the past. We draw comfort from continuing what we know best. Each of us thinks, at least superficially, that he is riding atop a vital and expanding research field. The trick is to ask ourselves if we truly are. Only by being honest with ourselves can we expect the concept of mid-career training to take hold as a rejuvenating force.

One step toward introspection is to answer some cogent questions which we can ask ourselves late at night when our resistance (and blood sugar) are low:

1. Is my research field rising or falling in importance?
2. Am I as near the forefront of my field as I was a few years ago?
3. When was the last time I presented a scientific paper at a meeting of peers (and did I feel comfortable before and afterwards)?
4. Do my results provide more data than ideas?
5. Does my work deal more with new places than with new subjects?
6. Do I have plans for new studies (and do I really plan to do them)?
7. Do I get much feedback from potential users (both scientific and nonscientific)? Other than myself, who cares about what I am doing?
8. Does my work still stimulate me (or is it interfering with what I really want to do)?

What's in it for me?

Clearly, mid-career training has negative as well as positive aspects—particularly if the training means relocation for an extended period. Work schedules may be disrupted, and so may your private life. In families, the absence of one parent places an extra burden on the other. The scientist returning to academic study may feel uncertainty or insecurity in competing with younger people, or in adapting to a new environment.

Potential benefits of mid-career training include greater job satisfaction, personal advancement, more effective service to the Station, your profession, and your country, and broadened involvement in scientific matters of national or international scope.

Because negative sides of mid-career training tend to be short-run and tangible, and positive sides tend to be long-run and less certain, it is easy to defer decisions on new training until "next year." Obviously, decisions on major training at mid-career should not be made without weighing fully the pros and cons.

What kinds of training are available?

Examples of "small training packages" include attending scientific conferences, enrolling in local short courses sponsored by public or private agencies, and presenting papers at scientific meetings. Training of this type is relatively painless, can be highly stimulating, and should occur frequently *throughout* a scientist's career. Although this would seem to be "part of the job" to many scientists, rarely is this kind of activity a formal requirement of a scientist's position. Yet, it affords an excellent means for keeping current in your field and exchanging information with active scientists elsewhere.

"Large training packages" may resemble a sabbatical. They are aimed at individuals with at least 3 years' experience in the Forest Service and at least 3 years remaining until first eligibility for retirement. Typically, they involve relocating the scientist for a period of 6 to 12 months at an extramural facility. Programs of this type should occur 7 to 10 years after the last major training experience, and may be repeated each 7 to 10 years. The training may be abroad and may include graduate and postgraduate studies, research fellowships, lectureships, visiting professorships, and interagency changes of duty. If training is nonacademic, it should benefit the host institution as well as the scientist and the Forest Service.

The aim of major training at 7- to 10-year intervals is to provide the scientist, and the Station, with fresh ideas and insights which can only be gained by placing the scientist in a stimulating, new environment away from the routine of the Research Work Unit. To achieve this, the Station has set a goal that each year two or three scientists will be provided major training.

Who pays for it?

The Government Employees Training Act of 1958 (GETA) authorizes U.S. Government agencies to pay all or part of the necessary expenses of training, including costs of:

1. Travel
2. Per diem in lieu of subsistence
3. Transportation of family and shipment of household goods and personal effects when these would be less than per diem payments for the period of training
4. Tuition
5. Library and laboratory fees
6. Books, materials and supplies
7. Other services or facilities related directly to the training.

Further clarification can be found in chapter 410 of the Federal and Departmental Personnel Manual, and chapter 6140 of the Forest Service Manual.

GETA guidelines and regulations are broad, leaving Forest Service administrators considerable discretion and flexibility. Under GETA, training is limited to a maximum of 1 year of job-related training at nongovernment facilities for each 10 years of service. The U.S. Office of Personnel Management, however, usually allows the employing agency to waive the "1-year-in-10" limit for scientific personnel.

Financial arrangements are based on the principle that no financial loss (or gain) to the employee should result from the training. The employee will receive full pay and expenses from the Station to the extent they are not provided by the training institution. Ordinarily, salary, travel to and from the host institution, and incidental expenses will be paid by the scientist's Research Work Unit. Extra expenses, such as job-related travel while in training, that cannot be covered by the Unit can be paid by the Station. Training expenses should not be a burden on the Unit. If funding difficulties are anticipated by scientists or their supervisors, Station administrators should be consulted about finding funding alternatives. Training expenses paid by the employee may be tax-deductible. You should, however, consult the Internal Revenue Service or private tax consultants for details.

How can I find out what's available?

Because of their number, variety and changing availability, a comprehensive catalogue of all training opportunities available to Forest Service scientists has never been compiled, but leads on general sources of information are indicated in the following discussion.

A starting point is the Station's Personnel Section. USDA Correspondence Courses are on file and are updated periodically. The Personnel Section also receives some, but not all, informational brochures on fellowships and other opportunities at academic institutions. Scientific meetings, and their call for papers, are advertised in professional journals. Short courses, such as those on new instrumentation, are usually advertised in mailed communications, and you can get one by being on some generalized mailing list, or by corresponding with technical representatives of scientific equipment companies. Notices about research assistantships abroad are generally channeled to Assistant Directors, who, in turn, route them to Project Leaders in appropriate RWU's.

IUFRO (International Union of Forestry Research Organizations) is another valuable source of information about opportunities in other countries. IUFRO is organized into divisions based on broad subject areas, each of which is composed of Working Groups interested in specific problem areas. Becoming active in a Working Group is an especially good starting point for the scientist who is seeking overseas contracts and opportunities. Planned or proposed meetings of Working Groups, giving dates, locations, and organizers, are published periodically in the *IUFRO News* along with lists of publications, including useful world directories of research institutions and workers in specific subject areas. IUFRO publications are available in the Station library. A list of general references on fellowships and scholarships at institutions both in this country and abroad follows which, while not exhaustive, provides a reference base for scientists seeking mid-career training of the "major" variety.

The point is this: it is *your* responsibility—not management's—to seek out specific training opportunities.

How about fellowships and scholarships?

If you are interested in applying for a scholarship or fellowship at an institution of higher learning, consult the following sources for information about eligibility requirements. Most of the sources cited are available for reference at your nearby university or college library.

American Council of Education.
1957- . *Fellowships in the arts and sciences.* Washington, D.C.
Issued annually. Offers basic information on awards in arts and sciences available from sources other than universities. Includes predoctoral fellowships, postdoctoral fellowships, and summer study. Cites references, including works listing aid available for study in specialized fields, such as accounting and librarianship.

Angel, Juvenal L.
1963-1964. *National register of scholarships and fellowships.* 4th ed. World Trade Academy Press, New York, N.Y. 2 vols.
Lists, by State, scholarship and loan funds, some at the graduate level, offered by private organizations and corporations, educational institutions, and State and city governments; and fellowships and grants, by subject field.

Canadian Bureau of Statistics.
1957- . *Awards for graduate study and research.* Queen's Printer, Ottawa.
Issued biennially. Formerly titled *Post-Graduate Scholarship and Fellowships Open to Canadian Students.* 1951-1954. Lists awards open to Canadians from sources in Canada and abroad, particularly from the United Kingdom and the United States. Notes, when possible, awards open to persons from outside Canada.

Conference Board of Associated Research Councils, Committee on International Exchange of Persons.
1953/1954- . *United States Government grants under the Fulbright-Hays Act. University lecturing. Advanced research. Europe, the Near East, the Far East, Africa.* Washington, D.C.
Issued annually. Title varies, and countries included vary. Other leaflets issued cover (a) Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay; (2) Australia, New Zealand; and (3) South and Southeast Asia.

Feingold, S. Norman.
1949-1962. *Scholarships, fellowships and loans.* 4 vols. Bellman, Cambridge, Mass.
Lists names and addresses of administering agencies and provides information on student-aid programs. Volumes 2, 3, and 4 contain revised and additional information, but do not repeat all of the data in the earlier volumes.

Mattingly, Richard Curtis.
1957. *Financial aid for college students: graduate.* U.S. Office of Education. Bull. 17. (Studies on financial assistance to students in higher education, Bull. 3)
Describes loans and employment available at each college or university in the various fields of study; now out of date, it is nevertheless the only national directory that lists aid offered by the institutions themselves.

UNESCO.
1948- . *Study abroad. International directory of fellowships, scholarships and awards compiled by UNESCO.* Paris, France.
Issued annually until 1964, then biennially. Describes fellowships and scholarships available for international study, including type, field of study, value, duration, number available, where application should be sent, and date limit; arranged according to donors of award, by administering agency or by country in which donor is located; includes list of organizations. (In English, French, and Spanish).

Walton, Ann D., and Marianna O. Lewis, eds.
1960- . *Foundation directory prepared by the Foundation Library Center.* Russell Sage Foundation, New York, N.Y.
An extensive list of foundations, many of which award grants or fellowships. Supplemented by *Foundation News.*

How do I write a training proposal?

Procedures for preparing mid-career training proposals are relatively uncomplicated, allowing wide latitude for exploiting opportunities judged beneficial to both the scientist and the Forest Service. Proposals may originate either with scientists or administrators. As a scientist, however, you have the primary responsibility. For unless you are convinced that the training is needed, it will not be effective.

After agreeing on a need for training, you and your supervisor plan a course of action and prepare and submit either Form AD-179 ("Request to Attend Meeting or Travel") or Form AD-182 ("Request for Training"). Project work loads may require that the training period be sometime in the future, but a target date should be set in any case so that the required forms are submitted.

Forms AD-179 and AD-182 require statements of the sponsoring institution, program itinerary, purpose and justification of the training, and financial arrangements. The level of administrative approval and requirements for additional documentation depend on the length of training and type of facility providing it. For training lasting 80 hours or less, only approval by the Project Leader and Assistant Director are needed, as well as Form AD-179 or AD-182. For periods exceeding 80 hours but not more than 39 weeks, the Station Director's approval is needed, together with a signed agreement from the applicant to remain in service after training for a period of at least three times the length of training. If you voluntarily leave Government Service during that period, you are obligated to repay the nonsalary costs of your training incurred by the Government. No such obligation exists if you are separated involuntarily. Training beyond 39 weeks requires approval of the Forest Service's Washington Office (WO) and additional documentation, such as college transcripts.

Training opportunities and required forms and approvals are summarized below:

Training opportunities under GETA	*Forms*	*Approval by*
USDA Correspondence courses	AD-182	Project Leader
Scientific meetings, seminars, workshops	AD-179 or -182	Project Leader Assistant Director
University or private short courses	AD-182	Project Leader Assistant Director
Advanced academic study, or Post-doctoral fellowships, visiting scientific positions	AD-182	
Not exceeding 39 weeks		Project Leader Assistant Director Director
Exceeding 39 weeks		Project Leader Assistant Director Director Washington Office

Approval of training at Government expense is granted on your supervisor's and administrator's determination that the training will benefit both you and the Forest Service research program. These benefits are weighted against costs of interrupted research and financial outlay. The cost-benefit analysis used has several implications for the drafting of training proposals likely to be received with favor. Since proposals are judged individually, you should state clearly in your proposal both the benefits to the Forest Service research program and the financial cost to the Government. You may wish to correspond with the host institution informally regarding its ability or willingness to bear all or part of the costs and to provide training facilities. Such willingness by the host institution lends favor to a proposal, as it demonstrates enthusiasm by a disinterested third party.

Forest Service financial support is commensurate with the probable benefits of training to the research program. The more tangible and certain the benefits, the greater the degree of Forest Service support. If benefits are less predictable, the degree of financial support needed from the host institution becomes greater. Again, you shoulder the main responsibility in seeing that training is timely and directed toward a greater understanding of important problem areas. Thus, special care should be taken in composing clear "Purpose and Justification" statements on Forms AD-179 and AD-182. Examples of approved training requests are appended to this *Guide.*

Appendix

Examples of research awards and training requests.

NEW ZEALAND NATIONAL RESEARCH ADVISORY COUNCIL

P.O. Box 12–240, Wellington North, New Zealand

FELLOWSHIPS

Applications closing on **1 September 1980** are invited for 12 fellowships to be taken up in 1981.

Place of Tenure

The awards will be for research at the branches of the Ministry of Agriculture and Fisheries, Department of Education, New Zealand Forest Service, Department of Internal Affairs, Department of Justice, Department of Labour, Department of Scientific and Industrial Research, Department of Social Welfare, Ministry of Transport, and Ministry of Works and Development, listed in this booklet.

Subjects

Priority for awards will be given to specific fields of research considered to be of national importance and to have special needs in the short-term for the expertise of senior and highly qualified scientists. Applicants offering applied and fundamental topics are considered, but fundamental research should be mission-orientated and in fields likely to contribute to the national welfare of New Zealand.

General Qualifications

There are no restrictions regarding nationality of applicants, but successful candidates must meet the requirements of the New Zealand immigration authorities. A good working knowledge of English is essential. There is no age limit, but applicants should possess the general qualifications for the type of fellowship for which application is made.

This Booklet

In this booklet, priority areas for research by different Government departments are listed. The institutions in which research may be carried out and their functions are listed for applicants' information and as a guide to their probable location of work if they are accepted.

Information

Further general information about the fellowships may be obtained from the Council's office. Applicants are encouraged however to acquaint themselves with New Zealand laws which may affect them. Of special interest are the Accident Compensation Act 1972, and the immigration regulations. Information will be available at New Zealand posts overseas.

Further information about the work of particular institutions may be obtained from the institution or the department concerned.

NEW ZEALAND FOREST SERVICE

Private Bag, Wellington

Senior and Post-doctoral Fellowships

Institutions at which Fellowships are Tenable

Production Forestry Division

Controlled burning—Derivation of suitable fuel condition and burning indices for different fuel types.

Entomology—Examination and development of efficient sampling procedures for intercepting the chance importation of forest and timber insects.

Harvesting—Evaluation and development of suitable cable systems for thinning and/or clear felling different crop types on steep country.

Herbicides—Evaluation of persistence of residues and possible environmental effects that might arise from wide-scale use of herbicides in forestry.

Human relations—Examination of factors that affect the performance, motivation and productivity of the work force engaged on forestry operations.

Log grading—Derivation of suitable log grades for radiata pine that reflect their value for different end products.

Log segregation—Evaluation of stump to mill harvesting systems and alternative strategies for segregating logs for different products and markets.

Mensuration—Means of adjusting existing growth models for influences of silvicultural treatments, forest fertilisation, genetic improvement, and disease effect.

Nutrition—Nutrient cycling and study of soil, pasture, animal, and tree interactions in grazed forests.

Recreation—Development and testing of methods for assessing demand for different forms of outdoor recreation in indigenous and exotic forests.

Roading—Evaluation of investment in roading in intensively managed plantations, particularly in respect to standards and density at different stages of the management cycle.

Tree breeding—Examination of methods for translating genetic gains in individual tree vigour to expected increases in stand volume. Determination of genotype x nutrient demand interactions for progenies of selected trees grown at both high and low nutrient levels.

Tree physiology—Assessment of clonal differences in radiata pine in resistance to stress and in efficiency in water and nutrient uptake.

Postal Address: The Director, Production Forestry Division, Forest Research Institute, Private Bag, Rotorua.

Functions: Research into all aspects of production forestry.

Forest Products Division

Bark utilisation—Composite sheet materials made from flake and bark or bark extracts overlaid with veneers.

Pollution control—Reduction in effluent from chemical pulping systems, bleaching systems, or mechanical pulping systems.

Timber engineering—Development and design of improved wood structural systems and components, in particular roof truss systems.

Pulp and Paper—Use of mathematical modelling techniques aimed at the development of closed process technology.

Wood permeability—Studies of movement of water and other fluids in relation to industrial processing such as preservation and drying.

Wood waste utilisation—Production of wood sugars by chemical or biochemical means.

Postal Address: The Director, Forest Products Division, Forest Research Institute, Private Bag, Rotorua.

Functions: All research into the properties and uses of forest products.

11

ANNOUNCEMENT
JAPANESE GOVERNMENT RESEARCH AWARDS FOR FOREIGN SPECIALISTS
- Science and Technology Agency -
1980-1981

The Government of Japan offers RESEARCH AWARDS to foreign specialists in the fields of natural and applied science and technology. The AWARD is administered annually by the Science and Technology Agency of the said Government for the promotion of international scientific co-operation, through enabling specialists of foreign countries to preform researches for approximately 7 months in Government laboratories with the following provisions.

QUALIFICATIONS

a) Applicants should never be of Japanese nationality.
b) Applicants should in principle be government personnel or of similar status and continue to be so during the tenure of the AWARD in Japan.
c) Applicants should have been engaged in scientific and technological research for more than three years after graduating from university.
d) Applicants should be in good health to be able to complete their research in Japan.
e) Applicants should have English or Japanese competency.

HOST INSTITUTE

The host institute will be selected among the Government laboratories engaged in natural and applied science and technology research but not among universities or colleges. (Refer to the LIST OF THE GOVERNMENT LABORATORIES below).

The programme does not cover military related fields.

TERMS OF AWARD

1. Recipients shall abide by the directions of the head of the host institute and its working rules during the tenure of the AWARD.
2. The Government of Japan will not be responsible for the damage, sickness and injury or loss that might occur to recipients during the tenure of the AWARD, on or off duty.
3. Recipients shall submit reports on their work done during the tenure before their departure from Japan.
4. When, during and after the tenure, recipients intend to formally publish, written or otherwise articles on the work done during the tenure, they shall obtain a prior consent from the head of the host institute.
5. The tenure of the AWARD will be as designated by the Director-General of the Promotion Bureau of the Science and Technology Agency in his letter.
6. The host institute/institutes will be as designated likewise by the Director-General.
7. In principle the extention of the tenure of the AWARD will not be approved.
8. The Japanese Government will bear the costs of the following for each recipient: (No provision is made for the accompanying family members.)
   a) Accommodation costs: 10,000 yen per day
   b) Travel costs: Round-trip air ticket (economy class) to and from Japan will be delivered to the recipient in advance.
9. If recipients wish to go home before the expiration of the tenure of the AWARD, they shall submit explanation statements to the Director-General of the Promotion Bureau of the Science and Technology Agency through the head of the host institute. When approved, they shall refund to the Science and Technology Agency the equivalent accommodation costs to the cut-off days.

APPLICATION PROCEDURE

Applicants should fill out and submit the following documents through the official channel of their own not later than the end of December 1979.

a) Application form (in triplicate, form specified) including the nomination by the authority of the institute of the present employment
b) Medical certificate of health (form not specified, original only)
c) Letter of recommendation (from one person, original only)
d) Reprints of the recent publications (two items at most)

AD-179
(REV. 2-70)

REQUEST: 1) TO ATTEND MEETING
2) FOR TRAVEL AUTHORIZATION
(See reverse side for instructions)

PAGE 1 OF 1 PAGE(S)

(1) REQUESTING AGENCY
USDA Forest Service, PSW Station

(2) PLACE OF MEETING
San Carlos de Bariloche, Argentina

(3) TITLE OF MEETING AND SPONSORING ORGANIZATION

(4) OPENING DATE	(5) CLOSING DATE	(6) TRAVEL TO BEGIN	(7) TRAVEL TO END
		November 1, 1980	December 15, 1980

(8) KIND OF MEETING *(Check one)*

☐ INTERNATIONAL ☐ OTHER OVERSEAS ☒ COMMON INTEREST ☐ NATIONAL ☐ REGIONAL ☐ STATEWIDE

(9) IF "INTERNATIONAL" OR "FOREIGN" LIST OTHER COUNTRIES TO BE VISITED ON OFFICIAL TIME
Argentina

(10) ITINERARY
Honolulu, Hawaii to San Carlos de Bariloche, Argentina and return

(11) MODE OF TRAVEL *(Check one)*

☒ COMMON CARRIER ☐ GOVERNMENT VEHICLE ☐ PRIVATELY OWNED AUTOMOBILE-RECOMMENDED MILEAGE _____

(12) RECOMMENDED PER DIEM $ 10.00

(13) NAMES AND TITLES OF PROPOSED PARTICIPANTS	OFFICIAL STATION	ESTIMATED TRAVEL EXPENSES		
		TRANSPORTATION	PER DIEM	TOTAL
Scientist, John Q., Jr.	Honolulu, Hawaii	$1444.00	$450.00	$1894.00

(14) PURPOSE OF MEETING AND JUSTIFICATION STATEMENT

To visit National Parks in the area and conduct study on bird use of bamboo/Southern beech forests in collaboration with Dr. O.P. Pearson, University of California, Berkeley, during breeding season.

(15) FINANCIAL ARRANGEMENTS

U.S.D.A. FUNDS		OTHER FUNDS	
APPROPRIATION SYMBOLS	AMOUNT	EXPLANATION	AMOUNT
Mgt. Code 184	$1894.00	Personal funds	$1500.00

(16) APPROVALS

DATE	✓	SIGNATURE	DATE	✓	SIGNATURE
		AGENCY USE			AGENCY HEAD
		AGENCY USE			*INTERNATIONAL ORGANIZATIONS STAFF
		AGENCY USE			*GROUP HEAD (ASSISTANT SECRETARY)

** Applicable only when meeting is "International" or "Other Overseas" (See instructions, Block 16)*

AD-179 (REV. 2-70)

REQUEST: 1) TO ATTEND MEETING
2) FOR TRAVEL AUTHORIZATION
(See reverse side for instructions)

PAGE 1 OF 1 PAGE(S)

(1) REQUESTING AGENCY
USDA Forest Service, PSW Station

(2) PLACE OF MEETING
Chicago, Illinios

(3) TITLE OF MEETING AND SPONSORING ORGANIZATION Annual Meeting, Soil Science Society of America, (sponsored jointly by Amer. Soc. Agron., Crop Sci. Soc. Amer., Soil Sci. Soc. Amer.)

(4) OPENING DATE	(5) CLOSING DATE	(6) TRAVEL TO BEGIN	(7) TRAVEL TO END
12/4/78	12/8/78	12/3/78	12/9/78

(8) KIND OF MEETING *(Check one)*

☐ INTERNATIONAL ☐ OTHER OVERSEAS ☐ COMMON INTEREST ☒ NATIONAL ☐ REGIONAL ☐ STATEWIDE

(9) IF "INTERNATIONAL" OR "FOREIGN" LIST OTHER COUNTRIES TO BE VISITED ON OFFICIAL TIME

(10) ITINERARY

Leave Redding via San Francisco to Chicago
Leave Chicago via San Francisco to Redding

(11) MODE OF TRAVEL *(Check one)*

☒ COMMON CARRIER ☐ GOVERNMENT VEHICLE ☐ PRIVATELY OWNED AUTOMOBILE-RECOMMENDED MILEAGE _____

(12) RECOMMENDED PER DIEM $ 45.00 max.

(13) NAMES AND TITLES OF PROPOSED PARTICIPANTS	OFFICIAL STATION	ESTIMATED TRAVEL EXPENSES		
		TRANSPORTATION	PER DIEM	TOTAL
		$350	315	$665

(14) PURPOSE OF MEETING AND JUSTIFICATION STATEMENT

Was invited to serve on a special session symposium panel on "Assessing Nitrogen Availability in Forest and Rangeland Ecosystems". Authors and presents a paper titled: Assessing Soil N Availability under Forest Conditions". In a regular session, coauthors the paper: "Fertilizing Calif. Forests; Nitrogen Changes in the Soil Solution". The latter documents changes in groundwater chemistry following forest fertilization in a PSW cooperative study with Region 5 which represents the Station.

(15) FINANCIAL ARRANGEMENTS

U.S.D.A. FUNDS		OTHER FUNDS	
APPROPRIATION SYMBOLS	AMOUNT	EXPLANATION	AMOUNT
Mgt. Code 777	$665		

(16) APPROVALS

DATE	✓	SIGNATURE	DATE	✓	SIGNATURE
		AGENCY USE			AGENCY HEAD
		AGENCY USE			*INTERNATIONAL ORGANIZATIONS STAFF
		AGENCY USE			*GROUP HEAD (ASSISTANT SECRETARY)

** Applicable only when meeting is "International" or "Other Overseas" (See instructions, Block 16)*

REQUEST, AUTHORIZATION, AGREEMENT, AND CERTIFICATION OF TRAINING

A. Agency code, agency subelement and submitting office number (example – xx xx xxxx) 01: AG - 11 - 2751

B. OFFICE USE ONLY

C. Request status (Mark (X) one) 02: [X] Initial or Resubmission [ ] Correction or Cancellation

Section A–TRAINEE INFORMATION

1. Applicant's name (Last First Middle Initial) Indicate preferred title (example – Miss, Mrs., Mr., Ms., etc.): SCIENTIST, JOHN Q., Jr.

Enter first 5 letters of last name 03: SCIEN

2. Social Security Number 04: 222-33-4444

3. OPM Use 05:

4. OPM Use

5. OPM Use

6. Position level (Mark (X) one only): [ ] a. Nonsupervisory [ ] b. Supervisory [ ] c. Manager [ ] d. Executive

7. Organization mailing address (Branch/Division/Office/Bureau/Agency):
1151 Punchbowl St., Room 323
Honolulu, HA 96813

8. Office telephone: Area code 808 Number 346 Ext. 5669

9. Continuous civilian service: Years Months

10. Number of prior non-Government training days.

11. Position title/function: Research Forester

12. Pay plan/series/grade/step: GS-460-12/3

13. OPM Use

14. OPM Use

Section B–TRAINING COURSE DATA

15a. Name and mailing address of training vendor (No., street, city, State, ZIP code):
Oregon State University
Corvallis, OR 97331

b. Location of training site (If same, mark box) [X]

Always complete: State 41 City 0920

16. Course title and training objectives (Benefits to be derived by the Government):
Wide range of plant ecology and related graduate courses. To prepare trainee to assume responsibility for endangered plant research in the Hawaiian Islands.

17. Catalog/Course No.: a. Subject matter 5100; b. Course code

18. Training period (6 digits): a. Start 79 09 17 (Year Month Day); b. Complete 80 09 19

19. No. of course hours (4 digits) 07: a. During duty 2080; b. Nonduty; c. TOTAL 2080

20. Training codes (See instructions): a. Purpose; b. Type; c. Source; d. Special interest

AGENCY USE ONLY

20e. Training only [X] Training and MOHR [ ]

20f. Award, Scholarship, or Grant 0–No 1–Yes [0]

20g. Training completed [ ] Training not completed [ ]

20h. Training at a college [1] 0–Not applicable 1–Full-time basis 2–Part-time basis

20i. Method of Instruction [06]
00–Computer assisted 01–Conference 02–Correspondence 03–Laboratory 04–Lecture/Demo. 05–Programmed 06–Reading/Study 07–Seminar 08–Simulation 09–Television 10–Other

Section C–ESTIMATED COSTS AND BILLING INFORMATION

21. Direct costs and appropriation/fund chargeable

Item	Amount Dollars	Amount Cents	Appropriation/fund
a. Tuition	$ 1800	00	TR-21-001234
b. Books or materials	295	00	
c. Other (Specify)			
d. (enter 4 digits in dollar column) 12 TOTAL	$ 2095	00	

22. Indirect costs and appropriation/fund chargeable

Item	Amount Dollars	Amount Cents	Appropriation/fund
a. Travel	$ 2100	00	TR-21-001234
b. Per diem (Includes ____ meals and lodging for ____ nights)	4745	00	
c. Salary	24,627	00	
d. (enter 4 digits in dollar column) 13 TOTAL	$ 31,472	00	

23. Document/Purchase Order/Requisition No.

24. 8-Digit Station Symbol (example – 12-34-5678): 12-11-0005

25. BILLING INSTRUCTIONS (Furnish invoice to):
USDA Forest Service
P.O. Box 245
Berkeley, CA 94701

Section D–APPROVALS

26a. Immediate supervisor – Name and title: I. M. SUPERVISOR, Project Leader; Area code/Tel. No./Ext.: 808-546-5669

b. Signature; Date

27a. Second-line supervisor – Name and title; Area code/Tel. No./Ext.

b. Signature; Date

28a. Training officer – Name and title; Area code/Tel. No./Ext.

b. Signature; Date

Section E–APPROVAL/CONCURRENCE

29a. Authorizing official – Name and title; Area code/Tel. No./Ext.

b. Signature; [ ] Approved [ ] Disapproved; Date

Section F–CERTIFICATION OF TRAINING COMPLETION

30a. Certifying official – Name and title; Area code/Tel. No./Ext.

b. Signature; Date

TRAINING FACILITY ▶ Bills should be sent to office indicated in item 25. • Please refer to number given in item 23 to assure prompt payment.

REQUEST, AUTHORIZATION, AGREEMENT, AND CERTIFICATION OF TRAINING

A. Agency code, agency subelement and submitting office number (example -xx xx xxxx) 01: AG - 11 - 2751

B. OFFICE USE ONLY

C. Request status (Mark (X) one) 02: [X] Initial or Resubmission [ ] Correction or Cancellation

Section A—TRAINEE INFORMATION

1. Applicant's name (Last - First - Middle Initial) Indicate preferred title (example -Miss, Mrs., Mr., Ms., etc.): SCIENTIST, John Q. Dr.

Enter first 5 letters of last name 03: SCIEN

2. Social Security Number 04: 222-33-4444

3. OPM Use 05:

4. OPM Use

5. OPM Use

6. Position level (Mark (X) one only): [X] a. Nonsupervisory [ ] b. Supervisory [ ] c. Manager [ ] d. Executive

7. Organization mailing address (Branch/Division/Office/Bureau/Agency):
U.S. Forest Service
P.O. Box 245, Berkeley, CA 94701

8. Office telephone: Area code 415 | Number 486 | Ext. 3232

9. Continuous civilian service: Years | Months

10. Number of prior non-Government training days.

11. Position title/function: Geneticist (Plant)

12. Pay plan/series/grade/step: GS-601-12/4

13. OPM Use

14. OPM Use

Section B—TRAINING COURSE DATA

15a. Name and mailing address of training vendor (No., street, city, State, ZIP code):
Forestry Commission North Res. Sta.
Rossin, Midlothian EH25 9SY Scotland

b. Location of training site (If same, mark box) [X]

Always complete: State 92S | City 6360

16. Course title and training objectives (Benefits to be derived by the Government):
Participate in ongoing research on selection breeding of conifers & receive advanced training in new techniques.

17. Catalog/Course No.: a. Subject matter 6200 | b. Course code 0000

18. Training period (6 digits) 06: Year | Month | Day
a. Start: 78 | 09 | 01
b. Complete: 79 | 07 | 31

19. No. of course hours (4 digits) 07:
a. During duty: 1880
b. Nonduty:
c. TOTAL: 1880

20. Training codes (See instructions): a. Purpose | Code | 08 | c. Source | Code | 10; b. Type | Code | 09 | d. Special interest | Code | 11

AGENCY USE ONLY

20e. Training only [ ] / Training and MOHR [X]

20f. Award, Scholarship, or Grant: 0- No 1- Yes [0]

20g. Training completed [ ] / Training not completed [ ]

20h. Training at a college [0]: 0-Not applicable 1-Full-time basis 2-Part-time basis

20i. Method of Instruction [10]: 00-Computer assisted; 01-Conference; 02-Correspondence; 03-Laboratory; 04-Lecture/Demo; 05-Programmed; 06-Reading/Study; 07-Seminar; 08-Simulation; 09-Television; 10-Other

Section C—ESTIMATED COSTS AND BILLING INFORMATION

21. Direct costs and appropriation/fund chargeable

Item	Amount Dollars	Amount Cents	Appropriation/fund
a. Tuition	$		
b. Books or materials			
c. Other (Specify)			
d. (enter 4 digits in dollar column) 12 TOTAL	$		

22. Indirect costs and appropriation/fund chargeable

Item	Amount Dollars	Amount Cents	Appropriation/fund
a. Travel	$ 1196	00	TR-21-001234
b. Per diem (Includes ____ meals and lodging for ____ nights)	20	00	
c. Salary	26691	00	
d. (enter 4 digits in dollar column) 13 TOTAL	$ 27907	00	

23. Document/Purchase Order/Requisition No.

24. 8-Digit Station Symbol (example 12 34 5678): 12-11-0005

25. BILLING INSTRUCTIONS (Furnish invoice to)

Section D—APPROVALS

26a. Immediate supervisor – Name and title: Robert Z. Callaham, Director | Area code/Tel. No./Ext.: 415-486-3333

b. Signature | Date

27a. Second-line supervisor – Name and title | Area code/Tel. No./Ext.

b. Signature | Date

28a. Training officer – Name and title | Area code/Tel. No./Ext.

b. Signature | Date

Section E—APPROVAL/CONCURRENCE

29a. Authorizing official – Name and title | Area code/Tel. No./Ext.

b. Signature | [ ] Approved [ ] Disapproved | Date

Section F—CERTIFICATION OF TRAINING COMPLETION

30a. Certifying official – Name and title | Area code/Tel. No./Ext.

b. Signature | Date

TRAINING FACILITY ▶ Bills should be sent to office indicated in item 25. • Please refer to number given in item 23 to assure prompt payment.

The Forest Service of the U.S. Department of Agriculture

. . . Conducts forest and range research at more than 75 locations from Puerto Rico to Alaska and Hawaii.

. . . Participates with all State forestry agencies in cooperative programs to protect and improve the Nation's 395 million acres of State, local, and private forest lands.

. . . Manages and protects the 187-million-acre National Forest System for sustained yield of its many products and services.

The Pacific Southwest Forest and Range Experiment Station

. . . Represents the research branch of the Forest Service in California, Hawaii, and the western Pacific.

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